



COMPLEX PROJECTS
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**CITY OF POINT PLEASANT
MASON COUNTY, WEST VIRGINIA**

**POINT PLEASANT RIVER MUSEUM
POINT PLEASANT, WEST VIRGINIA
THRASHER PROJECT #060-10152**

**ADDENDUM #1
November 05, 2020**

Prospective Bidders:

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated October 23, 2020. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

A non-mandatory Pre-Bid Conference was held at the project site located in Point Pleasant, West Virginia, on November 02, 2020 at 10:00am., L.P.T. The Attendance List is attached to this Addendum.

GENERAL:

1. The Pre-Bid Sign-In Sheet and Agenda are included with this Addendum.
2. All questions to be addressed by addendum must be submitted via email by 4:00 p.m. on Thursday, November 12, 2020. Please submit questions to the following:
lprovidenti@thethrashergroup.com;
jlyons@thethrashergroup.com.
3. Contractors are responsible for reviewing the entire set of documents.
4. Questions received directly from subcontractors will not be accepted or addressed via addendum. Subcontractors must have one of the General Contractors submit questions on their behalf.
5. Bids will only be accepted from General Contractors for the full scope of work.
6. No substitution requests will be accepted during bidding. Substitution requests for convenience will be accepted for a period of 60 days following the Notice to Proceed given to the awarded Contractor per specification section 012500 Substitution Procedures.
7. Bids are due **Friday, November 20, 2020 at 1:00 pm** to the City of Point Pleasant at the City Offices, 400 Viand Street, Point Pleasant, West Virginia.

8. There is a building permit required for the project. The permit fee schedule is attached to this addendum.
9. The Owner's budget for construction is \$2,000,000.00.

CHANGES TO SPECIFICATIONS:

1. 102239 FOLDING PANEL PARTITIONS – **Delete** items 2.6.B Work Surfaces and 2.6.C Chalk Tray.

CHANGES TO DRAWINGS:

1. Sheet A7.01 – **Revise** room SUPPORT 204 to be vinyl tile.
2. Sheet A5.01: 3/A5.01 – **Remove** 15/32" 25 GA. Furring Channel from detail in Type 4 wall construction. **Revise** overall width to 4-7/8"

QUESTIONS & ANSWERS:

Q-01) Is there a requirement for a fire rated access hatch in Room 206 JC?

A-01) Yes, provide fire-rated access hatch in JC 206 ceiling.

Q-02) Within the limit of painted exposed structure, is there a requirement to paint all exposed Structural Steel, Steel Joist Framing, Metal Decking, Fire Suppression Piping, Gas Piping, Plumbing Piping exposed or Plumbing Piping Insulated, Ductwork, Electrical Conduits and Junction Boxes, etc.? If painting of all MEP materials is required, will each MEP be painted a different color or will the MEP materials be painted to match the Structural Steel, Steel Joist Framing & Metal Decking?

A-02) In all areas with exposed structure, all elements shall be painted a single solid color (blacked out) above the level of the lowest exposed element, excluding light fixtures.

Q-03) Review snapshot below Sheet A7.01. Could further clarification or detail be provided?

A-03) This question will be addressed in a subsequent addendum.

Q-04) What type floor finish is in the elevator cab?

A-04) Provide vinyl tile in elevator cab.

Q-05) Review attached screen shot of the area where VCT meets sealed concrete in rooms 203 and 205. Please provide a transition detail.

A-05) Demounted partitions in this space will be installed by Owner after construction. Rooms 203, 204, and 205 shall be treated as a single space. Provide vinyl tile throughout.

Q-06) The following rooms number 106, 108, 200, 202, 204, & 206 does not include resilient base & accessories. What product is to be installed?

A-06) Provide flooring and base per the room finish schedule on sheet A6.01, except as modified in A-05) above. Where finish is indicated to be SEALED CONC., no floor covering shall be provided.

Q-07) The following room numbers 106, 108, 200, 202, 204, & 206 & S1 indicate the floor finish to be sealed concrete. The concrete specifications nor painting specifications indicate what type of finish. Could a specification be provided for Sealed Concrete as noted on Sheet A6.01 Room Finish Schedule?

A-07) This question will be addressed in a subsequent addendum.

Q-08) The Room Finish Schedule indicates all walls to receive one of the following: Storefront/PT'D GWB, PT'D GWB or PT'D CMU. The Room Finish Schedule does not indicate installing tiling on any of the walls, however, when reviewing Sheet A4.01 Enlarged Plan Views & Interior Elevations, tiling is identified. Which Plan Sheet supersedes the other?

A-08) No plan sheets are intended to supersede any others. The portions of wall indicated to receive tile on sheet A4.01 shall receive tile. The portions not indicated to receive tile, shall receive the finish indicated in the Room Finish Schedule. For clarity, the extent of tile shall be 5'-0" AFF in all locations. In rooms 104 and 105, tile shall be provided the full width of the North wall, and the full depth of the partition on the East and West wall. Provide tile in other restrooms as indicated on sheet A4.01

Q-09) Review the metal pan stairs finishing specification below:

2.9 FINISHES

A. Finish metal stairs after assembly.

B. Preparation for Shop Priming: Prepare uncoated, ferrous-metal surfaces to comply with SSPC- SP 3, "Power Tool Cleaning."

C. Apply shop primer to uncoated surfaces of metal stair components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

The finish schedule does not indicate to paint all components of the metal pan stair assembly, including wall mounted railing. Will finish coats to the metal pan stair assembly and wall mounted railing be required?

A-09) Yes, all components of the metal pan stair assembly and wall mounted railings shall be finish painted. Contractor's option for shop finish painting or field finish painting.

Q-10) Review the metal grating stairs finishing below:

2.8 FINISHES

- A. Finish metal stairs after assembly.
- B. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M for other steel and iron products.
 - 1. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.
 - 2. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.
- C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
- D. Apply shop primer to uncoated surfaces of metal stair components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.
 - 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.
There are no plan notes as to what the finish of the metal grating stair assembly should be. Could further information be provided as to what the intent of the finish shall be on the metal grating stairs?

A-10) Metal grating stairs shall be finish painted. Contractor's option to shop finish paint or field finish paint.

Q-11) Is there a specification for the solid surface window sills?

A-11) Solid surface windowsills shall be from same manufacturer and of same quality as specified in section 123661.16 Solid Surfacing Countertops. Thickness as indicated in window details on A5.04. Width shall be full width of window. Depth varies depending on window location and wall construction, but all sills shall overhang finished wall by 1" as indicated on sheet A5.04.

Q-12) On Sheet A2.01 Exterior Elevations; Note E7. Who provides and installs the building plaque and could specifications be provide in order to prepare the substrate for mounting?

A-12) This question will be addressed in a subsequent addendum.

Q-13) On Sheet A2.01 Exterior Building Elevations; Note E8. Who provides and installs the building signage and could specifications be provided in order to prepare the substrate for mounting?

A-13) This question will be addressed in a subsequent addendum.

Q-14) Refer to Specification Section 101423.16 Signage and Graphics:

3.4 INTERIOR SIGNAGE SCHEDULE

A. Refer to the list of interior signs required for the project as attached to this Section.
Could a signage schedule be provided?

A-14) This question will be addressed in a subsequent addendum.

Q-15) Refer to Specification Section 101423.16 Signage and Graphics:

1.2 RELATED SECTIONS

- A. Section 10410 - Directories.
- B. Section 10420 - Plaques.
- C. Section 10430 - Exterior Signage.
Where are these specification?

A-15) This question will be addressed in a subsequent addendum.

Q-16) Refer to Specification Section 102113.19 Plastic Toilet Compartments

2.2 SOLID-PLASTIC TOILET COMPARTMENTS

A. Basis of Design: Scranton Products Aria Partitions
Did not see comment pertaining to other Manufacturer's as approved "or equal".
Will other plastic toilet compartment manufacturer's be accepted, such as General Partitions, All American Corp, Ampco Products, Inpro, Metpa Corp, Partition Systems International?

A-16) Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions. Other manufacturers may be considered, but substitution requests are not guaranteed to be accepted. To the Architect's knowledge at the time of this addendum, the named manufacturer is the only one that complies with the full-height partition requirements.

Q-17) Refer to Specification Section Solid Surfacing Countertops 123661.16:

2.1 SOLID SURFACE COUNTERTOP MATERIALS

- A. Solid Surface Material: Homogeneous-filled plastic resin complying with ICPA SS-1.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Avonite Surfaces.

- b. E. I. du Pont de Nemours and Company.
- c. Formica Corporation.
- d. Samsung Chemical USA, Inc.

May Wilsonart be accepted as an approved manufacturer?

A-17) Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions.

Q-18) Refer to Specification Section Machine Room-Less Electric Transaction Passenger Elevators 14123.16.

Will the following be acceptable manufacturers?

- a. Thyssen krupp
- b. Dover
- c. Otis
- d. West Virginia Elevator
- e. DC Elevator

A-18) Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions. The shaft was designed to accommodate the Basis of Design elevator. The cost for any modifications to shaft dimensions and any subsequent design changes required to accommodate an alternate manufacturer's product shall be borne by the Contractor per the requirements of section 012500 Substitution Procedures.

Q-19) Refer to Masonry Veneer 042613 Specifications. White sand and white mortar is very expensive compared to other products. Will white mortar and white sand need to be considered during the bidding phase?

A-19) This question will be addressed in a subsequent addendum.

Q-20) Refer to Specification Section Bituminous Damproofing 077113 and Note 2 on Sheet 3.02 & A3.03: The note indicates to install full height of the wall, review attached product data sheet for R-Guard being requested as an approved "or equal".

A-20) Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions.

Q-21) Refer to Specification Section Self-Adhering Waterproofing 071326: Is this specification section for the elevator pit only or does the specification apply to the entire perimeter foundation wall as well?

A-21) This specification applies to the elevator pit only.

- Q-22)** Refer to Sheet A2.01 Exterior Elevations: Will painting of the roof access ladder and safety cage be required?
- A-22)** Finish shall be painted galvanized steel. Contractor's options for shop finish painting, or field finish painting.
- Q-23)** Will a ladder be required in the elevator pit and will the ladder require finish paint?
- A-23)** Yes, a ladder shall be required in the elevator pit. Ladder shall be finish painted galvanized steel. Contractor's option for shop finish painting or field finish painting.
- Q-24)** Will nelson studs be required to be welded to the structure steel prior to deck placement and concrete pours within the second floor suspended concrete on decking?
- A-24)** This question will be addressed in a subsequent addendum.
- Q-25)** Will welded wire mesh actually be required within the suspend concrete on metal deck as indicated on Sheet S300?
- A-25)** This question will be addressed in a subsequent addendum.
- Q-26)** What is the camber and/or deflection rate design of the steel joist framing for the second floor concrete and metal deck? Will shoring for the concrete pour be required due to the span?
- A-26)** This question will be addressed in a subsequent addendum.
- Q-27)** Was the steel joist framing, metal decking and concrete designed strong enough to carry ride along trowel machines for concrete finishing and scissor lifts for construction activities?
- A-27)** This question will be addressed in a subsequent addendum.
- Q-28)** Refer to Specification Section Folding Panel Partitions 102239: May Kwik-Wall be considered as an acceptable manufacturer?
- A-28)** Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions.
- Q-29)** 29. Refer to Specification Section Manufactured Plastic-Laminate-Clad Casework 123216: May Architectural Interior Products, Inc (dba Top Shop) be considered as an acceptable manufacturer?
- A-29)** Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions.

- Q-30)** Refer to Specification Section Roller Window Shades 122413:
- A. Are shades to be installed at window openings tagged 11, 12 & 13 only?
 - B. Are shades required at SF1, SF2, SF3 & SF4?
- A-30)** Yes, shades shall only be provided at window openings tagged 11, 12, & 13. No shades shall be provided at any storefront framing.
- Q-31)** Refer to Specification Section Resilient Tile Flooring 096519: May Azrock be considered as an acceptable manufacturer?
- A-31)** Substitution requests are not being accepted during bidding. See General statements above for clarification on substitutions.
- Q-32)** Refer to Specification Section Acoustical Panel Ceilings 095113:
- 2.2 ACOUSTICAL PANELS
- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Armstrong World Industries, Inc.
 - 2. CertainTeed Corporation.
 - B. Acoustical Panel Standard: Manufacturer's standard panels according to ASTM E 1264.
 - C. Classification: Type XII, Form 2, Pattern E or G.
 - D. Color: As selected from manufacturer's full range.
 - E. Light Reflectance (LR): 0.90 for white panels only.
 - F. Sabins: Minimum 3.5 sabins/panel.
 - G. Edge/Joint Detail: Square.
 - H. Thickness: 1-1/2 inches minimum. Is this correct?
 - I. Modular Size: Minimum 24 inches by 24 inches.
- A-32)** Basis of Design ceiling tile is Armstrong Ultima 1910. Type IV, Form 2, Pattern E. Dimensions shall be 24" x 24" x 3/4".
- Q-33)** Should the wet wall at the drinking fountain between doors 104 and 105 be a 6" or 8" metal stud in order to accommodate the plumbing rough-ins?
- A-33)** This question will be addressed in a subsequent addendum.
- Q-34)** Referring to Gas Piping from the meter up the side of the exterior building to HVAC on the roof: Is the Mechanical Engineer requiring all gas piping to be welded pipe?
- A-34)** This question will be addressed in a subsequent addendum.
- Q-35)** Will the Owner be providing the work order for the gas connection with the local utility company?
- A-35)** This question will be addressed in a subsequent addendum.

Q-36) Has the WVDOH Permit for the Type F Trench Repair at the drain connection crossing Main Street been established?

A-36) This question will be addressed in a subsequent addendum.

Q-37) F.F.E has been set to 560.90. What is the top and bottom curb elevations on Main Street?

A-37) This question will be addressed in a subsequent addendum.

Q-38) Where is the bench mark located? Can the stakes and elevations be provided from the preliminary investigative survey provided during the design phase?

A-38) This question will be addressed in a subsequent addendum.

Q-39) Has the proposed F.F.E. been set to allow for proper slopes for WVDOH & ADA cross slopes specifications of concrete sidewalks?

A-39) This question will be addressed in a subsequent addendum.

Q-40) Regarding the brick paver note on Sheet C1.01: Could a detail be provided should a concrete curb be needed for the brick pavers? Could a section detail be provided indicating the minimum thickness of gravel bedding and what type of sands may be required for brick paving installations? What price range of brick pavers should be quoted. Low end brick paver or premium brick paver?

A-40) This question will be addressed in a subsequent addendum.

Q-41) Refer to Sheet C1.01 Over Legend and Over-All Site Plan C1.01: The existing contour lines are hard to distinguish amongst all the information being plotted on one plan sheet. What is the limits of Earth Moving? Is the site balanced? Do existing foundations remain in place?

A-41) This question will be addressed in a subsequent addendum.

Q-42) If unsuitable materials are encountered, will the Site Contractor be paid on a CY Unit of Measure for over excavation and placement of compacted suitable materials?

A-42) This question will be addressed in a subsequent addendum.

Q-43) Refer to Foundation Note # 1 on Sheet S001 snap shot: Will the geo-tech reports be provided by American Geotech and issued in the Addendum? Conflicting statements: Is the Geotech report for recommendation use for the Structural Engineer and the General Contractor shall bid as per Structural Drawings & Technical Specifications or are the directions within the reports to be included in the bid? Should ground water or unsuitable earth not meeting the minimum 2,000 PSF be encountered. Will there be a pay item for

dewatering and a pay item for removal of unsuitable material and replacement with engineered fill?

A-43) This question will be addressed in a subsequent addendum.

Q-44) Sheet C1.01 Site Plan: The limits of disturbance are not identified. Is CMU Properties, LLC Parcel 23 available for staging?

A-44) This is being discussed with the Owner and will be addressed in a subsequent Addendum.

Q-45) Refer to Construction Means & Methods Note 1:

CONSTRUCTION MEANS AND METHODS

1. Contractor agrees that Contractor shall assume sole and complete responsibility for job site conditions during the course of the Work, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that Contractor shall defend, indemnify, and hold Owner and Structural Engineer harmless from any and all liability, real or alleged, in connection with the performance of the Work on this Project, excepting for liability arising from the sole negligence of Owner or Structural Engineer.

The drawings do not indicate to install any type of chain-link fencing around the limits of disturbance. Is it in the best interest of all parties to include a 6 foot tall temporary chain link fence with entrance gate to the construction site or is orange plastic construction fence acceptable?

A-45) Contractor shall provide and install Site Enclosure Fence as required in section 015000 Temporary Facilities and Controls.

Q-46) Refer to Sheet A3.02 Note: 34 4" PERF. FOOTING DRAIN WRAPPED IN GEOTEXTILE AND SURROUNDED BY CLEAN STONE FILL. SEE 'C' SHEETS FOR CONTINUATION AND TIE-IN. Where is the tie-in for the foundation drainage piping?

A-46) This question will be addressed in a subsequent addendum.

Q-47) Refer to Sheets P1.01 Notes A, B & J. and Sheet C1.01 Site Plan: It appears the storm piping from the building to the new Type B Drainage Inlet has been inadvertently left out of the bid documents. Can a storm piping plan be provided indicating pipe types and sizes, clean-outs, etc.?

A-47) This question will be addressed in a subsequent addendum.

Q-48) Refer to Specification Section Soil Preparation 329113: Is it of the Civil Engineer's opinion that on site soils is adequate for new turfs and grasses, therefore, eliminating the need to import soils?

A-48) This question will be addressed in a subsequent addendum.

Q-49) Has the bidding documents been reviewed by the WV State Fire Marshall's Office?

A-49) The bidding documents are currently under review by the WV State Fire Marshal's office. Any changes required by the WVSFM review will either be issued in a subsequent addendum, or addressed via change order, if necessary, with the awarded Contractor.

Q-50) Is the Plan Review Letter from the WV State Fire Marshall's available?

A-50) See A-49 above.

Q-51) Has the City of Point Pleasant reviewed the bidding documents and has the City of Point Pleasant issued a plan review letter?

A-51) This question will be addressed in a subsequent addendum.

Q-52) Can the work order for the new electrical service be provided?

A-52) This question will be addressed in a subsequent addendum.

Q-53) Will the Owner be responsible for the associated costs of the Electrical Service work order, should the work order not be generated prior to the bidding phase?

A-53) This question will be addressed in a subsequent addendum.

Q-54) Can the work order for the new communication service be provided?

A-54) This question will be addressed in a subsequent addendum.

Q-55) Will the Owner be responsible for the associated costs of the Communication Service work order, should the work order not be generated prior to the bidding phase?

A-55) This question will be addressed in a subsequent addendum.

Q-56) It is a little concerning when there is a 90 day hold period. Are the funds all already available for the construction of this project.

A-56) This question will be addressed in a subsequent addendum.

Q-57) The Request for Bids state a 90 day hold period. If the project is within the Owner's budget, how soon could a Notice of Award be generated?

A-57) Notice of Award is anticipated in early December 2020 with an anticipated construction start date of early January 2021.

Q-58) Are there any Federal monies appropriated for this project, thus, mandating Prevailing Wages?

A-58) Prevailing Wages are not applicable to this project.

Q-59) Review comments below on the Request for Bids:

The Work will be substantially completed by August 15, 2021. Liquidated damages shall be \$1500.00 per calendar day. Should the Design Team and Owner take the entire 90 day bid hold period before awarding the project, this would only give (7) Seven Months for Construction.

Time Line:

Bid Date: November 20, 2020

(90) Ninety Possible Hold Period Deadline: February 15, 2021

Possible On Site Start Date on Submittals: February 15, 2021

Submittals Schedule: Complete by March 15, 2021

(125 Normal Work Days Available) Mandatory Substantial Completion Date: August 15, 2021

In my opinion this is not enough time to construct a (2) two story building with primarily masonry and structural steel. Are we to include an accelerated schedule costs in our bid proposal?

A-59) See anticipated award and start dates in A-57 above. Contractor shall bid the project as they deem necessary to meet the required schedule.

Q-60) With the short amount of construction days, can the Design Team turn-over Submittals within (5) five working days?

A-60) Submittal review periods shall be as stated in section 013300 Submittal Procedures. If Contractor requests expedited review of individual submittals during construction, every attempt will be made by the Design Team to accommodate the request, but no expedited reviews shall be guaranteed.

Q-61) With the short amount of construction days, can the Design Team turn-over (RFI's) Request for Information within (3) working days?

A-61) RFI review periods shall be as stated in section 013100 Project Management and Coordination. If Contractor requests expedited review of individual RFI's during

construction, every attempt will be made by the Design Team to accommodate the request, but no expedited reviews shall be guaranteed.

Q-62) With the short amount of construction days, can the Design Team attend a preinstallation meeting within (24) twenty-four hours notice?

A-62) Architect's attendance is not regularly required at preinstallation conferences per section 013100 Project Management and Coordination. Should Architect's attendance be required, every attempt will be made to accommodate the request in the requested timeframe, but guarantee shall be made.

Q-63) With the short amount of construction days, can the Design Team with all pertinent information in hand address a (COP) Change Order Proposal within (24) twenty-four hours when the COP is directly impacting the Sequence of Operations?

A-63) COP's shall be reviewed in accordance with sections 012600 Contract Modification Procedures and A201-2017 (the Agreement). If Contractor requests expedited review of individual COP's during construction, every attempt will be made by the Design Team to accommodate the request, but no expedited reviews shall be guaranteed. In cases of items critical to the Sequence of Operations and the general progress of the construction, alternate means such as a Construction Change Directive may be utilized in an attempt to not cause undue delay.

Q-64) Refer to Sheet E4.02 & Sheet C1.01: Sheet E4.02 indicates a Transformer Pad Detail, however, Sheet C1.01 does not indicate a location. Will a transformer be required for this project?

A-64) This question will be addressed in a subsequent addendum.

Q-65) Refer to Sheet M1.01 & Sheet S103: Sheet M1.01 indicates (3) three RTU's, however, Sheet S103 does not show the locations of the structural steel support typical roof unit support detail identified on Sheet S503. Should we be concerned with any coordination issues with the locations of the RTU's, structural steel and architectural layout below?

A-65) This question will be addressed in a subsequent addendum.

Q-66) Refer to Sheet C1.01 the (50') Fifty linear foot dimension in front of overhead door and the (8) pipe bollards: Finishing asphalt around pipe bollards next to a building in hand work and does not have a neat appearance. Recommending this area to include a concrete apron in lieu of asphalt paving.

A-66) This question will be addressed in a subsequent addendum.

Q-67) Refer to Sheet C1.01 Pipe Bollard Locations, C2.02 Steel Bollard Detail and Exposed Metal Specifications: Since the pipe bollards has been clearly identified to be painted, is there still a need to have them galvanized?

A-67) This question will be addressed in a subsequent addendum.

Q-68) Refer to Specification Section Exposed Aggregate Concrete Finishing 033523 & C1.01: The detail legend in front of the museum is the same as the area identified as brick pavers. Where is the exposed aggregate concrete finishing to be installed?

A-68) Exposed aggregate concrete finishing shall be provided at the main entry of the building as indicated on the A-sheets.

Q-69) Refer to Specification Section Non-Structural Metal Framing 092216: Appears the distance from F.F.E. to bottom of second floor deck is about 15'-8". Is there a concern about the distance from the bottom of the second floor deck to the proposed ceiling height of 10'-0" for suspended drywall ceilings? This is about a 5'-8" distance of suspension. Is fastening the Non-Structural Metal Suspended Framing System to the bottom of the steel joist system permitted? Will the Stamped Engineered Drawings be required for the Non-Structural Metal Framed Suspension Ceiling System?

A-69) This question will be addressed in a subsequent addendum.

Q-70) Refer to Specification Section Cast-in-Place Concrete 033000: Upon reviewing the specifications there were no related information pertaining to pouring slab on deck. Could specifications be provided that coordinates with the structural steel, steel joist framing and metal decking for the second floor?

A-70) This question will be addressed in a subsequent addendum.

Q-71) For clarification: Wall type 1 does not include in-wall insulation. Is this correct. See wall sections on sheet A5.01.

A-71) Correct. Wall Type 1 does not include in-wall insulation.

Q-72) Requesting clarification of the following locations are the only Interior Wall Detail receiving 1-1/2" Metal Furring. (Wall Type 2). Is this correct?

A-72) Correct. Wall Type 2 is the only interior partition type to receive 1-1/2" metal furring. Exterior walls also receive 1-1/2" metal furring as detailed in the wall sections.

Q-73) Wall Type 4 indicates to install a 25 Ga. Furring Strip to the Metal Stud. Please clarify the following: What size furring to be used? Does the door frame wrap the gypsum board assembly? Example: Door 206 has a 5-7/8" throat, however, $3\text{-}1/2\text{' + }5/8\text{' + }5/8\text{' = }4\text{-}3/4\text{'}$ plus missing size of furring channel = ? Refer to Sheet A5.03 Door Detail -

Interior Hollow Metal Door: Could a detail be provided to account for the doors in Wall Type 4?

- A-73)** For Wall Type 4, the furring channel may be omitted. The assembly shall otherwise be as detailed, with an overall thickness of 4-7/8". The door frame shall be a slip-on drywall type to accommodate the above wall thickness.
- Q-74)** Referring to stern wheel identified on Sheet A2.01. Will an actual size stern wheel be mounted on the building and who provide and install the stern wheel?
- A-74)** The stern wheel shall be part of the building sign and will be representational and of approximate scale and dimension depicted on the drawings. Further detail will be provided in a subsequent Addendum.
- Q-75)** Is there a need to install the 1-1/2" furring a layer of 5/8" gypsum on the perimeter wall behind the chase wall in restrooms 103, 104 & 105?
- A-75)** No, furring and layer of gypsum on the perimeter may be omitted in the areas indicated.
- Q-76)** Will the exterior exposed lintels required finish paint or remain galvanized?
- A-76)** Exterior exposed lintels shall be galvanized, and finish painted.
- Q-77)** Refer to domestic water supply to aquarium on Sheet P2.01 Note: P. 1/2" CW DOWN TO SERVE AQUARIUM. This area is an exposed ceiling area. Is it possible to run the 1/2" supply line underground and up to the aquarium in lieu of the eye sore of running it down from the ceiling in an exposed ceiling area?
- A-77)** Yes, under-slab routing is acceptable for this purpose in this location.
- Q-78)** Review elevations for restrooms 104 & 105. Should wall tile have been identified on elevation 14/A4.01 similar to elevation 16/A4.01?
- A-78)** The area depicted in 14/A4.01 shows the inside of the full-height toilet partition. No wall tile is required in the specific area indicated. Wall tile shall be provided and installed in accordance with A-08 above.
- Q-79)** Refer to Sheet E4.01: The Electrical Drawings indicate a 20KW Generator. I cannot seem to locate the generator on the Civil Plans. Please identify the underground fuel source and underground electrical to the building.
- A-79)** This questions will be addressed in a subsequent addendum.

Q-80) SECTION 083323 Overhead Coiling Doors; 2.2, K, 1: Confirm that clear anodized finish is acceptable.

A-80) Clear anodized finish will not be acceptable. Overhead coiling door finish shall be either color anodized per reference specification section, or factory color finished in color selected by Architect from manufacture's full range, including custom colors.

Q-81) SECTION 102239: 2.6, B: Confirm if marker boards are required. If so, confirm quantity & location.

A-81) Work surfaces shall not be required in folding panel partitions, nor shall chalk trays.

Sincerely,

THE THRASHER GROUP, INC.



Josh Lyons
Architect



**POINT PLEASANT
MASON COUNTY, WEST VIRGINIA
PROPOSED
POINT PLEASANT RIVER MUSEUM
THRASHER PROJECT #101-060-10152**

PRE-BID CONFERENCE AGENDA

PROJECT LOCATION: Point Pleasant, WV

ARCHITECTS PROJECT #: 060-10152

DATE OF CONFERENCE: November 2, 2020 at 10:30 am.

CONFERENCE LOCATION: City of Point Pleasant, 400 Viand St., Point Pleasant, WV
25550

Introductions

-Kenton Blackwood (The Thrasher Group, Inc.)

-Josh Lyons (The Thrasher Group, Inc.)

Owner Introductions

-Brian Billings – Mayor

-Amber Tatterson – City Clerk

-Randy Hall

I. General Project Description

The Work of Project is defined by the Contract Documents and consists of the following:

The approximate quantities of Work to be Bid upon is as described as follows:

A two-story, 10,000 gross square foot building to house the River Museum and ancillary spaces. The structure consists of load-bearing masonry walls with brick veneer and EIFS cladding systems, and limited aluminum storefront entry systems. Foundations are concrete masonry with reinforced concrete spread footings. Partitions are generally of gypsum board and non-structural metal framing. The building incorporates an elevator and metal pan stairs for conveyance systems. All utilities and operational systems shall be provided including a full sprinkler system, gas and electric mechanical systems, domestic and sanitary plumbing systems, lighting, power, and data electrical systems, electronic access control, security systems

II. Bidding Information

a. General

- Substantial Completion: August 15, 2021
- Final Completion: 14 Calendar Days Thereafter
- Bids are due on **November 20, 2020 @ 1:00 pm** at City Offices. Bids will be opened and read publicly.
- Liquidated Damages are set at **\$1500/Per Day**.
- Bidding Documents issued as hard copy drawings and hard copy specifications are available for \$100 per set.
Electronic sets of Bidding Documents may be obtained from QuestCDN.com for \$15.00 per set via the following link:
https://qap.questcdn.com/qap/projects/prj_browse/ipp_browse_grid.html?projType=all&provider=5828748&group=5828748.

b. Bid Opening Requirements (Pay attention to full list)

c. Bidding Information

- A two envelope system will be used.
- Envelope No. 1 must have the following information presented on the front:
Name and address of Bidder
Bid on Point Pleasant River Museum
Received by City of Point Pleasant
- Envelope No. 2 labeled “Bid Proposal” shall also be placed inside of Envelope #1.
- Envelope No. 1 will be opened first and the Bid Opening Requirement items checked for compliance as outlined on the Bid Opening Checklist on page BOR - 1 of these contract documents. If such documents are found to be in order, Envelope No. 2 “Bid Proposal”, will then be opened and will be publicly read aloud. If the documents required to be contained in Envelope No. 1 are not in order, Envelope No. 2 “Bid Proposal” will not be opened and the Bid will be considered non-responsive and will be returned to the Bidder.
- A Bidder may not withdraw his Bid for a period of sixty (60) days after the date set for the opening of Bids.
- Bids shall be accompanied by a Bid Bond payable to the City of Point Pleasant, for an amount equal to five percent (5%) of the base Bid.

-Bidders must hold a current West Virginia contractor's license on the date of Bid Opening.

-Bids received after the scheduled closing time for the reception of Bids will be returned unopened to the Bidders.

-City of Point Pleasant reserves the right to reject any and all Bids.

-Method of Award – Award will be made off of total base bid.

III. B & O Taxes – Verify w/ Owner

IV. Building Permit – Verify w/ Owner

V. Addressing Questions

- All questions that wish to be answered via addendum must be submitted in writing to architect/ engineer, our contact information is above. Any questions not submitted in writing will not be addressed via addendums and are at the risk of the contractor to include in the bid pricing.

-

VI. Addendum

- After today's pre-bid meeting we will issue addendum #1 with a copy of today's sign in sheet. Any questions that are submitted after today's meeting will be addressed in addendum #2. We ask that all final questions to be addressed by addendum be submitted by **4 PM on November 12th**, so that we may finalize and format to be sent out.

-

- All questions need sent to Josh Lyons and Lori Providenti – lprovidenti@thethrashergroup.com

VII. Owner Comments

VIII. Question and Answer Session

IX. Site Visit

BUILDING PERMIT FEE SCHEDULE

PROJECT COST	FEE	PROJECT COST	FEE
\$ 2,070,000.01 - \$ 2,080,000.00	\$ 6,251.00	\$ 2,570,000.01 - \$ 2,580,000.00	\$ 6,751.00
\$ 2,080,000.01 - \$ 2,090,000.00	\$ 6,281.00	\$ 2,580,000.01 - \$ 2,590,000.00	\$ 6,781.00
\$ 2,090,000.01 - \$ 2,100,000.00	\$ 6,311.00	\$ 2,590,000.01 - \$ 2,600,000.00	\$ 6,811.00
\$ 2,100,000.01 - \$ 2,110,000.00	\$ 6,341.00	\$ 2,600,000.01 - \$ 2,610,000.00	\$ 6,841.00
\$ 2,110,000.01 - \$ 2,120,000.00	\$ 6,371.00	\$ 2,610,000.01 - \$ 2,620,000.00	\$ 6,871.00
\$ 2,120,000.01 - \$ 2,130,000.00	\$ 6,401.00	\$ 2,620,000.01 - \$ 2,630,000.00	\$ 6,901.00
\$ 2,130,000.01 - \$ 2,140,000.00	\$ 6,431.00	\$ 2,630,000.01 - \$ 2,640,000.00	\$ 6,931.00
\$ 2,140,000.01 - \$ 2,150,000.00	\$ 6,461.00	\$ 2,640,000.01 - \$ 2,650,000.00	\$ 6,961.00
\$ 2,150,000.01 - \$ 2,160,000.00	\$ 6,491.00	\$ 2,650,000.01 - \$ 2,660,000.00	\$ 6,991.00
\$ 2,160,000.01 - \$ 2,170,000.00	\$ 6,521.00	\$ 2,660,000.01 - \$ 2,670,000.00	\$ 7,021.00
\$ 2,170,000.01 - \$ 2,180,000.00	\$ 6,551.00	\$ 2,670,000.01 - \$ 2,680,000.00	\$ 7,051.00
\$ 2,180,000.01 - \$ 2,190,000.00	\$ 6,581.00	\$ 2,680,000.01 - \$ 2,690,000.00	\$ 7,081.00
\$ 2,190,000.01 - \$ 2,200,000.00	\$ 6,611.00	\$ 2,690,000.01 - \$ 2,700,000.00	\$ 7,111.00
\$ 2,200,000.01 - \$ 2,210,000.00	\$ 6,641.00	\$ 2,700,000.01 - \$ 2,710,000.00	\$ 7,141.00
\$ 2,210,000.01 - \$ 2,220,000.00	\$ 6,671.00	\$ 2,710,000.01 - \$ 2,720,000.00	\$ 7,171.00
\$ 2,220,000.01 - \$ 2,230,000.00	\$ 6,701.00	\$ 2,720,000.01 - \$ 2,730,000.00	\$ 7,201.00
\$ 2,230,000.01 - \$ 2,240,000.00	\$ 6,731.00	\$ 2,730,000.01 - \$ 2,740,000.00	\$ 7,231.00
\$ 2,240,000.01 - \$ 2,250,000.00	\$ 6,761.00	\$ 2,740,000.01 - \$ 2,750,000.00	\$ 7,261.00
\$ 2,250,000.01 - \$ 2,260,000.00	\$ 6,791.00	\$ 2,750,000.01 - \$ 2,760,000.00	\$ 7,291.00
\$ 2,260,000.01 - \$ 2,270,000.00	\$ 6,821.00	\$ 2,760,000.01 - \$ 2,770,000.00	\$ 7,321.00
\$ 2,270,000.01 - \$ 2,280,000.00	\$ 6,851.00	\$ 2,770,000.01 - \$ 2,780,000.00	\$ 7,351.00
\$ 2,280,000.01 - \$ 2,290,000.00	\$ 6,881.00	\$ 2,780,000.01 - \$ 2,790,000.00	\$ 7,381.00
\$ 2,290,000.01 - \$ 2,300,000.00	\$ 6,911.00	\$ 2,790,000.01 - \$ 2,800,000.00	\$ 7,411.00
\$ 2,300,000.01 - \$ 2,310,000.00	\$ 6,941.00	\$ 2,800,000.01 - \$ 2,810,000.00	\$ 7,441.00
\$ 2,310,000.01 - \$ 2,320,000.00	\$ 6,971.00	\$ 2,810,000.01 - \$ 2,820,000.00	\$ 7,471.00
\$ 2,320,000.01 - \$ 2,330,000.00	\$ 6,001.00	\$ 2,820,000.01 - \$ 2,830,000.00	\$ 7,501.00
\$ 2,330,000.01 - \$ 2,340,000.00	\$ 6,031.00	\$ 2,830,000.01 - \$ 2,840,000.00	\$ 7,531.00
\$ 2,340,000.01 - \$ 2,350,000.00	\$ 6,061.00	\$ 2,840,000.01 - \$ 2,850,000.00	\$ 7,561.00
\$ 2,350,000.01 - \$ 2,360,000.00	\$ 6,091.00	\$ 2,850,000.01 - \$ 2,860,000.00	\$ 7,591.00
\$ 2,360,000.01 - \$ 2,370,000.00	\$ 6,121.00	\$ 2,860,000.01 - \$ 2,870,000.00	\$ 7,621.00
\$ 2,370,000.01 - \$ 2,380,000.00	\$ 6,151.00	\$ 2,870,000.01 - \$ 2,880,000.00	\$ 7,651.00
\$ 2,380,000.01 - \$ 2,390,000.00	\$ 6,181.00	\$ 2,880,000.01 - \$ 2,890,000.00	\$ 7,681.00
\$ 2,390,000.01 - \$ 2,400,000.00	\$ 6,211.00	\$ 2,890,000.01 - \$ 2,900,000.00	\$ 7,711.00
\$ 2,400,000.01 - \$ 2,410,000.00	\$ 6,241.00	\$ 2,900,000.01 - \$ 2,910,000.00	\$ 7,741.00
\$ 2,410,000.01 - \$ 2,420,000.00	\$ 6,271.00	\$ 2,910,000.01 - \$ 2,920,000.00	\$ 7,771.00
\$ 2,420,000.01 - \$ 2,430,000.00	\$ 6,301.00	\$ 2,920,000.01 - \$ 2,930,000.00	\$ 7,801.00
\$ 2,430,000.01 - \$ 2,440,000.00	\$ 6,331.00	\$ 2,930,000.01 - \$ 2,940,000.00	\$ 7,831.00
\$ 2,440,000.01 - \$ 2,450,000.00	\$ 6,361.00	\$ 2,940,000.01 - \$ 2,950,000.00	\$ 7,861.00
\$ 2,450,000.01 - \$ 2,460,000.00	\$ 6,391.00	\$ 2,950,000.01 - \$ 2,960,000.00	\$ 7,891.00
\$ 2,460,000.01 - \$ 2,470,000.00	\$ 6,421.00	\$ 2,960,000.01 - \$ 2,970,000.00	\$ 7,921.00
\$ 2,470,000.01 - \$ 2,480,000.00	\$ 6,451.00	\$ 2,970,000.01 - \$ 2,980,000.00	\$ 7,951.00
\$ 2,480,000.01 - \$ 2,490,000.00	\$ 6,481.00	\$ 2,980,000.01 - \$ 2,990,000.00	\$ 7,981.00
\$ 2,490,000.01 - \$ 2,500,000.00	\$ 6,511.00	\$ 2,990,000.01 - \$ 3,000,000.00	\$ 8,011.00
\$ 2,500,000.01 - \$ 2,510,000.00	\$ 6,541.00	\$ 3,000,000.01 - \$ 3,010,000.00	\$ 8,041.00
\$ 2,510,000.01 - \$ 2,520,000.00	\$ 6,571.00	\$ 3,010,000.01 - \$ 3,020,000.00	\$ 8,071.00
\$ 2,520,000.01 - \$ 2,530,000.00	\$ 6,601.00	\$ 3,020,000.01 - \$ 3,030,000.00	\$ 8,101.00
\$ 2,530,000.01 - \$ 2,540,000.00	\$ 6,631.00	\$ 3,030,000.01 - \$ 3,040,000.00	\$ 8,131.00
\$ 2,540,000.01 - \$ 2,550,000.00	\$ 6,661.00	\$ 3,040,000.01 - \$ 3,050,000.00	\$ 8,161.00
\$ 2,550,000.01 - \$ 2,560,000.00	\$ 6,691.00	\$ 3,050,000.01 - \$ 3,060,000.00	\$ 8,191.00
\$ 2,560,000.01 - \$ 2,570,000.00	\$ 6,721.00	\$ 3,060,000.01 - \$ 3,070,000.00	\$ 8,221.00

BUILDING PERMIT FEE SCHEDULE

PROJECT COST	FEE	PROJECT COST	FEE
\$ 1,097,000.01 - \$ 1,098,000.00	\$ 3,305.00	\$ 1,570,000.01 - \$ 1,580,000.00	\$ 4,751.00
\$ 1,098,000.01 - \$ 1,099,000.00	\$ 3,308.00	\$ 1,580,000.01 - \$ 1,590,000.00	\$ 4,781.00
\$ 1,099,000.01 - \$ 1,100,000.00	\$ 3,311.00	\$ 1,590,000.01 - \$ 1,600,000.00	\$ 4,811.00
\$ 1,100,000.01 - \$ 1,110,000.00	\$ 3,341.00	\$ 1,600,000.01 - \$ 1,610,000.00	\$ 4,841.00
\$ 1,110,000.01 - \$ 1,120,000.00	\$ 3,371.00	\$ 1,610,000.01 - \$ 1,620,000.00	\$ 4,871.00
\$ 1,120,000.01 - \$ 1,130,000.00	\$ 3,401.00	\$ 1,620,000.01 - \$ 1,630,000.00	\$ 4,901.00
\$ 1,130,000.01 - \$ 1,140,000.00	\$ 3,431.00	\$ 1,630,000.01 - \$ 1,640,000.00	\$ 4,931.00
\$ 1,140,000.01 - \$ 1,150,000.00	\$ 3,461.00	\$ 1,640,000.01 - \$ 1,650,000.00	\$ 4,961.00
\$ 1,150,000.01 - \$ 1,160,000.00	\$ 3,491.00	\$ 1,650,000.01 - \$ 1,660,000.00	\$ 4,991.00
\$ 1,160,000.01 - \$ 1,170,000.00	\$ 3,521.00	\$ 1,660,000.01 - \$ 1,670,000.00	\$ 5,021.00
\$ 1,170,000.01 - \$ 1,180,000.00	\$ 3,551.00	\$ 1,670,000.01 - \$ 1,680,000.00	\$ 5,051.00
\$ 1,180,000.01 - \$ 1,190,000.00	\$ 3,581.00	\$ 1,680,000.01 - \$ 1,690,000.00	\$ 5,081.00
\$ 1,190,000.01 - \$ 1,200,000.00	\$ 3,611.00	\$ 1,690,000.01 - \$ 1,700,000.00	\$ 5,111.00
\$ 1,200,000.01 - \$ 1,210,000.00	\$ 3,641.00	\$ 1,700,000.01 - \$ 1,710,000.00	\$ 5,141.00
\$ 1,210,000.01 - \$ 1,220,000.00	\$ 3,671.00	\$ 1,710,000.01 - \$ 1,720,000.00	\$ 5,171.00
\$ 1,220,000.01 - \$ 1,230,000.00	\$ 3,701.00	\$ 1,720,000.01 - \$ 1,730,000.00	\$ 5,201.00
\$ 1,230,000.01 - \$ 1,240,000.00	\$ 3,731.00	\$ 1,730,000.01 - \$ 1,740,000.00	\$ 5,231.00
\$ 1,240,000.01 - \$ 1,250,000.00	\$ 3,761.00	\$ 1,740,000.01 - \$ 1,750,000.00	\$ 5,261.00
\$ 1,250,000.01 - \$ 1,260,000.00	\$ 3,791.00	\$ 1,750,000.01 - \$ 1,760,000.00	\$ 5,291.00
\$ 1,260,000.01 - \$ 1,270,000.00	\$ 3,821.00	\$ 1,760,000.01 - \$ 1,770,000.00	\$ 5,321.00
\$ 1,270,000.01 - \$ 1,280,000.00	\$ 3,851.00	\$ 1,770,000.01 - \$ 1,780,000.00	\$ 5,351.00
\$ 1,280,000.01 - \$ 1,290,000.00	\$ 3,881.00	\$ 1,780,000.01 - \$ 1,790,000.00	\$ 5,381.00
\$ 1,290,000.01 - \$ 1,300,000.00	\$ 3,911.00	\$ 1,790,000.01 - \$ 1,800,000.00	\$ 5,411.00
\$ 1,300,000.01 - \$ 1,310,000.00	\$ 3,941.00	\$ 1,800,000.01 - \$ 1,810,000.00	\$ 5,441.00
\$ 1,310,000.01 - \$ 1,320,000.00	\$ 3,971.00	\$ 1,810,000.01 - \$ 1,820,000.00	\$ 5,471.00
\$ 1,320,000.01 - \$ 1,330,000.00	\$ 4,001.00	\$ 1,820,000.01 - \$ 1,830,000.00	\$ 5,501.00
\$ 1,330,000.01 - \$ 1,340,000.00	\$ 4,031.00	\$ 1,830,000.01 - \$ 1,840,000.00	\$ 5,531.00
\$ 1,340,000.01 - \$ 1,350,000.00	\$ 4,061.00	\$ 1,840,000.01 - \$ 1,850,000.00	\$ 5,561.00
\$ 1,350,000.01 - \$ 1,360,000.00	\$ 4,091.00	\$ 1,850,000.01 - \$ 1,860,000.00	\$ 5,591.00
\$ 1,360,000.01 - \$ 1,370,000.00	\$ 4,121.00	\$ 1,860,000.01 - \$ 1,870,000.00	\$ 5,621.00
\$ 1,370,000.01 - \$ 1,380,000.00	\$ 4,151.00	\$ 1,870,000.01 - \$ 1,880,000.00	\$ 5,651.00
\$ 1,380,000.01 - \$ 1,390,000.00	\$ 4,181.00	\$ 1,880,000.01 - \$ 1,890,000.00	\$ 5,681.00
\$ 1,390,000.01 - \$ 1,400,000.00	\$ 4,211.00	\$ 1,890,000.01 - \$ 1,900,000.00	\$ 5,711.00
\$ 1,400,000.01 - \$ 1,410,000.00	\$ 4,241.00	\$ 1,900,000.01 - \$ 1,910,000.00	\$ 5,741.00
\$ 1,410,000.01 - \$ 1,420,000.00	\$ 4,271.00	\$ 1,910,000.01 - \$ 1,920,000.00	\$ 5,771.00
\$ 1,420,000.01 - \$ 1,430,000.00	\$ 4,301.00	\$ 1,920,000.01 - \$ 1,930,000.00	\$ 5,801.00
\$ 1,430,000.01 - \$ 1,440,000.00	\$ 4,331.00	\$ 1,930,000.01 - \$ 1,940,000.00	\$ 5,831.00
\$ 1,440,000.01 - \$ 1,450,000.00	\$ 4,361.00	\$ 1,940,000.01 - \$ 1,950,000.00	\$ 5,861.00
\$ 1,450,000.01 - \$ 1,460,000.00	\$ 4,391.00	\$ 1,950,000.01 - \$ 1,960,000.00	\$ 5,891.00
\$ 1,460,000.01 - \$ 1,470,000.00	\$ 4,421.00	\$ 1,960,000.01 - \$ 1,970,000.00	\$ 5,921.00
\$ 1,470,000.01 - \$ 1,480,000.00	\$ 4,451.00	\$ 1,970,000.01 - \$ 1,980,000.00	\$ 5,951.00
\$ 1,480,000.01 - \$ 1,490,000.00	\$ 4,481.00	\$ 1,980,000.01 - \$ 1,990,000.00	\$ 5,981.00
\$ 1,490,000.01 - \$ 1,500,000.00	\$ 4,511.00	\$ 1,990,000.01 - \$ 2,000,000.00	\$ 6,011.00
\$ 1,500,000.01 - \$ 1,510,000.00	\$ 4,541.00	\$ 2,000,000.01 - \$ 2,010,000.00	\$ 6,041.00
\$ 1,510,000.01 - \$ 1,520,000.00	\$ 4,571.00	\$ 2,010,000.01 - \$ 2,020,000.00	\$ 6,071.00
\$ 1,520,000.01 - \$ 1,530,000.00	\$ 4,601.00	\$ 2,020,000.01 - \$ 2,030,000.00	\$ 6,101.00
\$ 1,530,000.01 - \$ 1,540,000.00	\$ 4,631.00	\$ 2,030,000.01 - \$ 2,040,000.00	\$ 6,131.00
\$ 1,540,000.01 - \$ 1,550,000.00	\$ 4,661.00	\$ 2,040,000.01 - \$ 2,050,000.00	\$ 6,161.00
\$ 1,550,000.01 - \$ 1,560,000.00	\$ 4,691.00	\$ 2,050,000.01 - \$ 2,060,000.00	\$ 6,191.00
\$ 1,560,000.01 - \$ 1,570,000.00	\$ 4,721.00	\$ 2,060,000.01 - \$ 2,070,000.00	\$ 6,221.00



American Geotech, Inc.
601 Ohio Avenue
Charleston, WV 25302
(304) 340-4277
Fax 340-4278

AMERICAN GEOTECH, INC.

Geotechnical, Environmental and Testing Engineers

**REPORT OF
GEOTECHNICAL EXPLORATION & ENGINEERING ANALYSIS
PROPOSED POINT PLEASANT RIVER MUSEUM
316-318 MAIN STREET
PT. PLEASANT, WEST VIRGINIA**

Prepared For

**THE THRASHER GROUP, INC.
CLARKSBURG, WEST VIRGINIA**

JULY - 2020

(This report contains 11 pages, plus appendices)

AMERICAN GEOTECH, INC.

GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS

601 OHIO AVENUE
CHARLESTON, WV 25302
(304) 340-4277
Fax (304) 340-4278

July 31, 2020

Mr. Craig M. Baker
The Thrasher Group, Inc.
600 White Oak Boulevard
Clarksburg, WV 26330

**Re: Report of Geotechnical Exploration and Engineering Analysis
Proposed Point Pleasant River Museum
316-318 Main Street
Pt. Pleasant, West Virginia**

Dear Mr. Baker:

American Geotech, Inc. (AGI) has performed a geotechnical subsurface exploration and engineering analysis for the proposed Pt. Pleasant River Museum building, to be located at the site in Pt. Pleasant, West Virginia. The detailed geotechnical report is attached herewith.

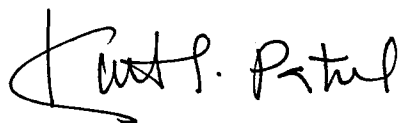
It is recommended that the contract documents must follow International Building Code (IBC) requirements, including a Schedule of Special Inspection Services for soils and foundations in the plans. The owner must employ a geotechnical testing agency practicing under a licensed geotechnical engineer for quality assurance and special inspections as set forth in IBC requirements Chapter 17.0, Sections 1704.2 to 1704.14.

We appreciate the opportunity of providing these services to you. If you have any questions concerning the information in this report, or should questions develop as the design proceeds, please contact our office at 304-340-4277.

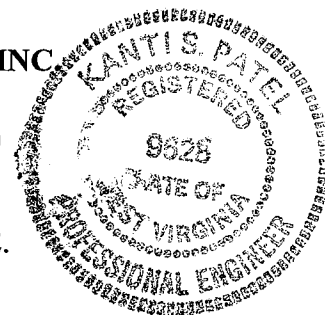
Thank you for your consideration.

Respectfully Submitted,

AMERICAN GEOTECH, INC



Kanti S. Patel, M.S.C.E., P.E.
Principal Engineer



GEOTECHNICAL ENGINEERING EXPLORATION AND ANALYSIS

PROPOSED PT. PLEASANT RIVER MUSEUM PT. PLEASANT, WEST VIRGINIA

EXECUTIVE SUMMARY

A brief summary of our recommendations for this project is presented below. This summary should be read in context with the entire report for proper interpretation.

Special Issues

- The subsurface conditions at this site are complex, due to the previous development history. These complex conditions include a subsurface comprised of up to 5± feet of clayey/sandy soil, rubble fill, relict concrete slabs, and concrete footings in the former basement area underlain by soft to stiff natural soils.
- The existing unengineered rubble fill at this site is not acceptable for support of the structure. We recommend uniformly undercutting the unengineered fill within the new building footprint (and at least 10 feet beyond on all sides) to a depth of 6 feet and replacing the materials in a controlled manner to the proposed subgrade elevation.
- The natural subgrade soils at the base of the undercut should be stabilized to a depth of 9 inches using 5 pounds-per-square-foot fresh Portland cement.
- It is recommended that the contract documents must follow International Building Code (IBC) requirements, including a Schedule of Special Inspection Services for soils and foundations in the plans. The owner must employ a geotechnical testing agency practicing under a licensed geotechnical engineer for quality assurance and special inspections as set forth in IBC requirements Chapter 17.0, Sections 1704.2 to 1704.14.

Foundations

- The proposed building should be supported on a rigid spread footing foundation system bearing within engineered fill. The rigid foundation system can be designed for a net allowable bearing capacity of 2,000 psf for all exterior and interior footings. It is expected that the building could experience ¾-inch of differential settlement between the interior and exterior columns.
- The rigid footings and foundation block wall should be tied together by extending vertical dowel bars into the block wall and grouting the wall solid.
- The base of all rigid footings should be at least 36 inches below the final exterior grade for adequate frost protection.

Floor Slab Support

- The floor slab can be constructed as a slab-on-grade, provided that the subgrade is prepared as recommended.
- A slab-on-grade floor can be supported on new engineered fill and designed for a subgrade modulus of reaction of 120 pounds-per-cubic-inch (PCI).

INTRODUCTION

This report presents the results of our geotechnical subsurface exploration and engineering analysis for the proposed Pt. Pleasant River Museum building in Pt. Pleasant, West Virginia. The purpose of this exploration was to generally define the subsurface conditions at this site and to characterize these conditions for the proposed structure.

The exploration included the drilling of five (5) Standard Penetration Test borings, visual observations of the general project site, the associated laboratory testing of the representative samples, and the report preparation. This report is intended to provide detailed information concerning subsurface conditions within the proposed construction site, sufficient for the basic design of the foundation system, and to provide geotechnical engineering recommendations for the site preparation, foundation design, and floor slab support. The exploration was authorized by Mr. Craig Baker of Thrasher Group, and the work was performed in accordance with our proposal/agreement submitted on June 29, 2020.

PROJECT INFORMATION

It is proposed to construct a two-story museum building on the site of several former structures with basements. The old basements reportedly had the concrete floor slabs and footings abandoned in place. The proposed building will consist of a two-story, pre-engineered steel frame and metal sided structure. The building loads will be supported on exterior and interior columns. Preliminary structural loading information was not available. The new building will occupy a footprint area of 5,000 square-feet, having dimensions of 50 feet by 100 feet. The ground floor will be constructed as an industry standard slab-on-grade set near the existing ground surface elevation.

The site is located on the eastern side of Main Street on a site formerly occupied by several commercial buildings. The ground surface is level across the project site, with the general surface elevations being depressed slightly within the area of the former structures. Several two-story structures with basements were previously located on the site and recently razed. When the structures were demolished, the former basement areas were filled in using rubble and locally obtained soil and rock materials. Underground utilities are present within the proposed building vicinity.

SUBSURFACE EXPLORATION

Five (5) Standard Penetration Test soil borings (B-1 to B-5) were drilled by AGI on July 23 and 24, 2020. The test borings were staked in the field by AGI personnel at the approximate locations shown on the attached Test Boring Location Plan. The test borings were drilled using a track-mounted drill rig. The test borings were advanced, and the bore holes were stabilized, using 2.25-inch interior diameter hollow stem augers. Sampling was accomplished in the undisturbed material below the bottom of the augers using a split-spoon sampler. The split-spoon sampler, having an exterior diameter of 2.0-inches and an interior diameter of 1 $\frac{3}{8}$ -inch,

was driven with a 140-pound automatic hammer falling 30 inches, in accordance with ASTM D 1586. The soil samples were recovered at 2.5 foot intervals within the upper 10 feet and at 5 foot intervals thereafter. The test borings were drilled to completion depths ranging from 16.5 to 65.5 feet below the present site grades.

Upon completion of the test borings, the holes were backfilled using the auger cuttings and the soil samples were returned to our soil mechanics laboratory, where they were visually examined by the project engineer and grouped for laboratory testing. The laboratory test program included natural moisture contents, pocket penetrometer readings, and an unconfined compressive strength test on the representative soil samples.

The attached test boring logs were then prepared by the project engineer, using the results of the laboratory tests, recovered soil samples, and notes taken by the drill foreman during the drilling operations. The classified logs and the basis for recommendations are included in the appendix. Each log gives the depth, thickness, and visual description of the soil strata penetrated, along with the sample identification data.

SUBSURFACE CONDITIONS

No specific surface materials were present at the test boring locations. Unengineered fill and rubble materials were encountered in our test borings and extended to a maximum depth of roughly 5.0 feet below the existing ground surface (bgs). Natural alluvial soil materials were encountered below the referenced fill layers in all test borings. Generally, the subsurface profile can be described as deposits of unengineered soil and rubble fill materials, relict concrete slabs and footings underlain by soft to stiff natural soils.

The unengineered random fill materials typically consisted of reddish-brown, brown, grayish-brown, and gray silty and sandy clay with rock, brick, concrete, coal and wood pieces. In B-4 and B-5, the existing fill was described as brown and black sand and clayey sand. Buried concrete slabs were present at depths of 1.0 to 1.5 feet in B-1 and B-3. A concrete footing was present from 4 to 5 feet in B-1. The random fill materials were noted as moist to damp and soft to stiff in consistency or very loose in relative density. The Standard Penetration Test (SPT) results ranged from 1 to 14 blows-per-foot (bpf). The moisture content of the fill materials ranged from 27.1% to 45.3%. Pocket penetrometer readings on various fill samples ranged from 0.75 to 1.0 tons-per-square-foot (TSF). The referenced unengineered fill strata extended to depths of approximately 3.5 to 5.0 feet bgs, where natural materials were encountered.

The natural soil typically consisted of brown, grayish-brown and gray silty clay. Below depths of 19.0 and 20.0 feet in B-2 and B-4, gray and brown clayey silt with fine sand was encountered to the depths of 24.0 to 30.0 feet. A thin layer of wet sandy clay was present below 30.0 feet in B-2. A stratum of brown silty sand with pebbles was encountered in B-2 and B-4 below depths of 24.0 and 35.0 feet. The natural soil deposits were soft to very stiff in consistency, having SPT N-values varying from 3 to 17 bpf. These deposits were generally described as moist to wet, having moisture contents of 20.8% to 25.3%. Pocket penetrometer readings in the natural strata varied from 1.0 to 4.5 TSF. An unconfined compressive strength test on a sample from B-2

produced a result of 0.99 TSF. The described natural soil layers at the referenced locations extended to the completion depth of 16.5 feet bgs in test borings B-1, B-3, and B-5.

The overburden soils extended to the top of weathered bedrock in B-2 and B-4 at depths of 63.0 to 64.5 feet below the existing surface. These borings were extended to completion depths of 65.0 to 65.5 feet without encountering auger refusal.

Trapped water was present at a depth of 3.0 feet in B-5. Groundwater was encountered during drilling in test borings B-2 and B-4 at depths of 24.0 to 32.0 feet bgs. We should state, however, that fluctuations in the location of the groundwater table, as well as perched or trapped water, can occur as a result of seasonal variations in precipitation, evaporation, surface runoff, and other factors not immediately apparent at the time of our exploration.

ANALYSIS AND RECOMMENDATIONS

The subsurface conditions at this site are somewhat complex, due to the previous development history. These complex conditions include a subsurface comprised of up to about 5 feet of unengineered soil and rubble fill, relict concrete slabs and concrete footings in the area of the former structures underlain by soft to stiff natural soils. With these types of variable conditions, the long-term total and differential settlements of any structure placed on these materials are the controlling geotechnical issues. In order to provide the desired long-term performance to the building foundations and slab-on-grade, we recommend uniformly undercutting all unengineered rubble fill within the proposed building footprint (and at least 10 feet beyond on all sides) to a depth of 6 feet and backfilling to the proposed subgrade elevation with engineered fill. This will provide uniform footing and floor slab support for the entire new building. The natural soils at the base of this undercut should be cement stabilized to a depth of 9 inches prior to backfilling.

Foundation Design

Foundation selection must satisfy two basically independent criteria. First, the bearing pressure transmitted to the foundation materials should not exceed the safe allowable bearing capacity at the bearing elevation. This allowable bearing capacity includes an adequate factor of safety applied to the material's shear strength. Second, settlements due to the consolidation of the underlying materials during the operating life of the structure must be within tolerable limits.

The proposed building should be supported on a rigid spread footing foundation system bearing within controlled, compacted, engineered fill. The rigid foundation system can be designed for a net allowable bearing capacity of 2,000 psf for all exterior and interior footings. The minimum thickness of all footing sections should be 18 inches and the minimum width of all continuous sections should be 24 inches. The base of all footings should be at least 36 inches below final exterior grade for adequate frost protection. The bottom of the footings should be maintained at the same bearing level throughout the foundation system.

The rigid footings should contain two mats of #6 (¾-inch) steel reinforcement bars evenly spaced within 3 inches from the top and bottom of the footer (dual mat). The steel

reinforcements should be continuous, passing through all corners and column footings in the foundation system. We also recommend that vertical dowel bars be placed every 16 inches c.c. to extend from the footer into the foundation block wall. The rigid footer and entire foundation block wall should be tied together by fully grouting the first 3 block courses containing the vertical dowel bars.

The bearing materials should be observed and tested by the geotechnical engineer, or his representative, prior to the placement of steel reinforcements or concrete. All loose materials should be removed from the excavations and a hand operated tamper should be used to compact the bearing surface in all foundation excavations to minimize the disturbance caused by the excavation process. Any soft, wet, or otherwise unsuitable bearing materials should be undercut to firm materials and replaced using lean concrete or flowable fill.

For a foundation system designed and constructed as recommended above, the estimated total and differential settlements should be on the orders of 1.5 and 0.75 inches respectively. If masonry walls are used, the potential effects of the settlement on the structure can be minimized by providing control/construction joints at critical locations and every 20 feet along the masonry walls. The control/construction joints should be provided where changes in the wall height or loading conditions occur.

Site Preparation

Following the stripping of the building pad and all areas planned for modification, the existing unengineered soil and rubble fill within the new building footprint (and at least 10 feet beyond on all sides) should be undercut to 6 feet below the existing grades and replaced using controlled, compacted, engineered fill. The removed soil materials should be removed from the site. Within the undercut area below the new building, the side walls of the excavations should be laid back to 1H:1V to allow more complete compaction of the new engineered backfill. The natural soil subgrade at the base of the undercut should be stabilized to a depth of 9 inches using fresh Type I/II Portland cement. Cement treatment should be mixed at an application rate of 5 pounds-per-square-foot.

The cement-stabilized subgrade at the base of the undercut should be proof-rolled, using a smooth drum vibratory roller, under the supervision of qualified geotechnical personnel. The proof-rolling equipment should weigh at least 15 tons and make at least 4 passes over the entire subgrade area in each of two perpendicular directions. Localized soft or yielding areas should be undercut to firm materials and replaced using cement-stabilized engineered fill. Engineered fill/backfill placement should then proceed according to the following guidelines.

The on-site fill materials are unsuitable for use as engineered fill and should be removed from the site. It is recommended that all engineered fill or premium fill required to reach the subgrade elevation within the building footprint be placed in maximum 8-inch lifts and compacted to 100% of the standard Proctor maximum density, as determined by ASTM D-698, and substantiated by on-site testing. The lift thickness should be reduced to 4 inches wherever hand operated equipment is used. The fill materials should be maintained within $\pm 3\%$ of the optimum moisture content during placement. All premium engineered fill materials should have a liquid

limit less than 40, a plasticity index less than 15, and a maximum aggregate particle size of 4 inches in any dimension. The particle size of the premium fill shall be maintained at the borrow site prior to loading on trucks, not at placement of the premium fill.

Floor Slab Support

The floor slab can be constructed as a slab-on-grade, provided that the subgrade is prepared as recommended. The engineered fill materials will be suitable for floor slab support following the recommended undercutting and subgrade preparation activities. We recommend that any existing materials within the building footprint that are softened or disturbed by weather conditions or construction activities be removed to the level of the underlying firm materials and be replaced with controlled, compacted, engineered fill.

The floor slab subgrade should be prepared as outlined in the previous Site Preparation section. The subgrade should be proof-rolled using a smooth drum vibratory roller under the supervision of the geotechnical engineer, or his authorized representative, to identify any areas in need of undercutting and replacement with controlled, compacted, engineered fill. A floor slab-on-grade underlain with a subgrade prepared as outlined above can be designed utilizing a modulus of subgrade reaction of 120 pounds-per-cubic-inch (pci).

Additionally, we recommend that a minimum 4 inch thick freely-draining, compacted granular base course be placed beneath any floor slab. This granular layer will aid in the final grading of the slab subgrade, and help to inhibit any water from rising to the floor slab. Prior to the placement of concrete, we also recommend that a vapor barrier, conforming to ASTM E 1745, be placed on top of the granular material to provide additional moisture protection. The surface curing of the slab should also be given attention, so as to minimize uneven drying and the associated potential cracking. A conventional concrete floor slab-on-grade should be isolated from the associated building foundation system. This can be accomplished with the use of proper construction joints. Also, to help minimize the widths and propagation of any shrinkage cracks which may develop near the surface of the slab, wire mesh reinforcement placed within the top half of the slab section should be included in the floor slab design. Based on our evaluation, up to 0.75-inch of differential settlement could occur below the floor slab.

Pavement Design Parameters

The subgrade should be proof-rolled under the supervision of the geotechnical engineer or his authorized representative, to identify any areas in need of additional compaction or undercutting and replacement with controlled, compacted, engineered fill. The subgrade should be retested immediately prior to placing the stone base and should meet 98% compaction requirements of the Standard Proctor test. We recommend the placement of a woven geotextile, such as Mirafi 600X or equivalent, above the final subgrade prior to the placement of the aggregate base course. The following is our estimate of the thicknesses for standard and heavy duty pavement sections. The proper placement of the subgrade drainage layer is the most critical aspect necessary for the long-term performance of the pavement sections. An assumed CBR value of 4 was used for the design of the pavement sections.

<u>Standard Duty Pavement - Automobile Parking</u>	
<u>Recommended Course</u>	<u>Thickness</u>
Hot-Mix Asphaltic Concrete Wearing Surface WVDOH 401	1.5 inches
Hot-Mix Asphaltic Concrete Base WVDOH 401	2.0 inches
Compacted Clean Aggregate Subbase WVDOH 311	6.0 inches
<u>Heavy Duty Pavement - Driveways and Truck Areas</u>	
<u>Recommended Course</u>	<u>Thickness</u>
Hot-Mix Asphaltic Concrete Wearing Surface WVDOH 401	1.5 inches
Hot-Mix Asphaltic Concrete Base WVDOH 401	3.5 inches
Compacted Clean Aggregate Subbase WVDOH 311	8.0 inches

The above pavement thicknesses are based on a strict quality control program. Not only is the compaction and the stability of the subgrade important, but the compaction of all asphaltic layers and aggregate bases are of equal importance. We recommend that the aggregate base course be compacted to 98% of the maximum relative density. Drainage should be maintained in both the granular base course and the finished pavement surface. The subgrade should be properly graded (crowned) to facilitate positive drainage during construction, and any water above the subgrade should be allowed to drain prior to further material placement. We would also recommend that in any pavement areas such as dumpster pads and loading docks, a cementitious concrete pavement be utilized, to accommodate the atypical loading conditions with respect to the asphaltic pavement design. It is important to remember that pavement sections designed for automobile parking may be damaged by the transit and parking of larger delivery or service type vehicles.

Seismic Soils Classification and Seismic Hazard Evaluation

Site Class D is recommended for the seismic design considerations, based upon our test borings, our knowledge and understanding of the area geology, and Table 1613.5.2 of the 2015 International Building Code (IBC). The overburden soils at this site are identified as Site Class D. The depth of weathered bedrock at this site averages 64 feet below the present surface and belongs to Site Class B. Although the IBC site classification is based on the average soil conditions within the top 100 feet of the subsurface profile, the IBC permits the soil properties to be estimated by a geotechnical engineer based upon known regional geologic conditions where

site-specific data is not available to the depth of 100 feet. A 100 foot deep test boring, possibly in conjunction with more sophisticated laboratory testing or field geophysical testing, would be required to more accurately determine the soil properties and soil site class. The actual seismic design should be performed by a structural engineer. The following potential seismic hazards resulting from earthquake motions have been evaluated.

1. A slope stability analysis was not included in the scope of this exploration. The ground surface within the building area is level and appears to be stable. Any exterior fill slopes planned for this project should be no steeper than 3H:1V with respect to potential instability resulting from earthquake motions.
2. The groundwater table was encountered at depths of 24 to 32 feet during our subsurface exploration. As the foundations will be bearing within cohesive materials, liquefaction of the bearing soils due to earthquake motions will not be an issue.
3. As no slopes, ponds or low lying areas are present within the proposed building vicinity, lateral spreading is unlikely.
4. As no faults are present within the site area, surface rupture is unlikely.

The following seismic design recommendations are offered based on seismic design maps prepared and provided by IBC 2015.

- Mapped Acceleration Parameters
 $S_S = 0.132$
 $S_1 = 0.067$
- Site Coefficients
 $F_a = 1.6$
 $F_v = 2.4$
- Seismic Design Parameters
 $S_{MS} = 0.211$
 $S_{M1} = 0.16$
 $S_{DS} = 0.14$
 $S_{D1} = 0.107$

Construction Considerations

The exposed subgrade soils can deteriorate and lose support when exposed to construction activity and environmental changes (this is particularly true for the fine grained fill soils). Subgrade soil deterioration can occur in the form of freezing, erosion, softening from ponded water, and rutting from construction traffic. If the exposed subgrade surface in the slab areas becomes softened and deteriorated, it must be properly repaired through scarification and re-compaction immediately prior to stone placement. If this has to be performed during wet weather conditions, it would be worthwhile to consider undercutting the disturbed soil and replacing it with a flowable fill “mud mat” working surface or stabilizing the existing materials with Portland cement.

Construction Monitoring

Close testing and monitoring by geotechnical personnel will be a critical aspect of this project. As a minimum, these services should be provided during undercutting, site preparation, structural fill placement, foundation installation, and floor slab construction operations. We respectfully request that American Geotech be selected to provide the field testing and quality control inspection services for this project.

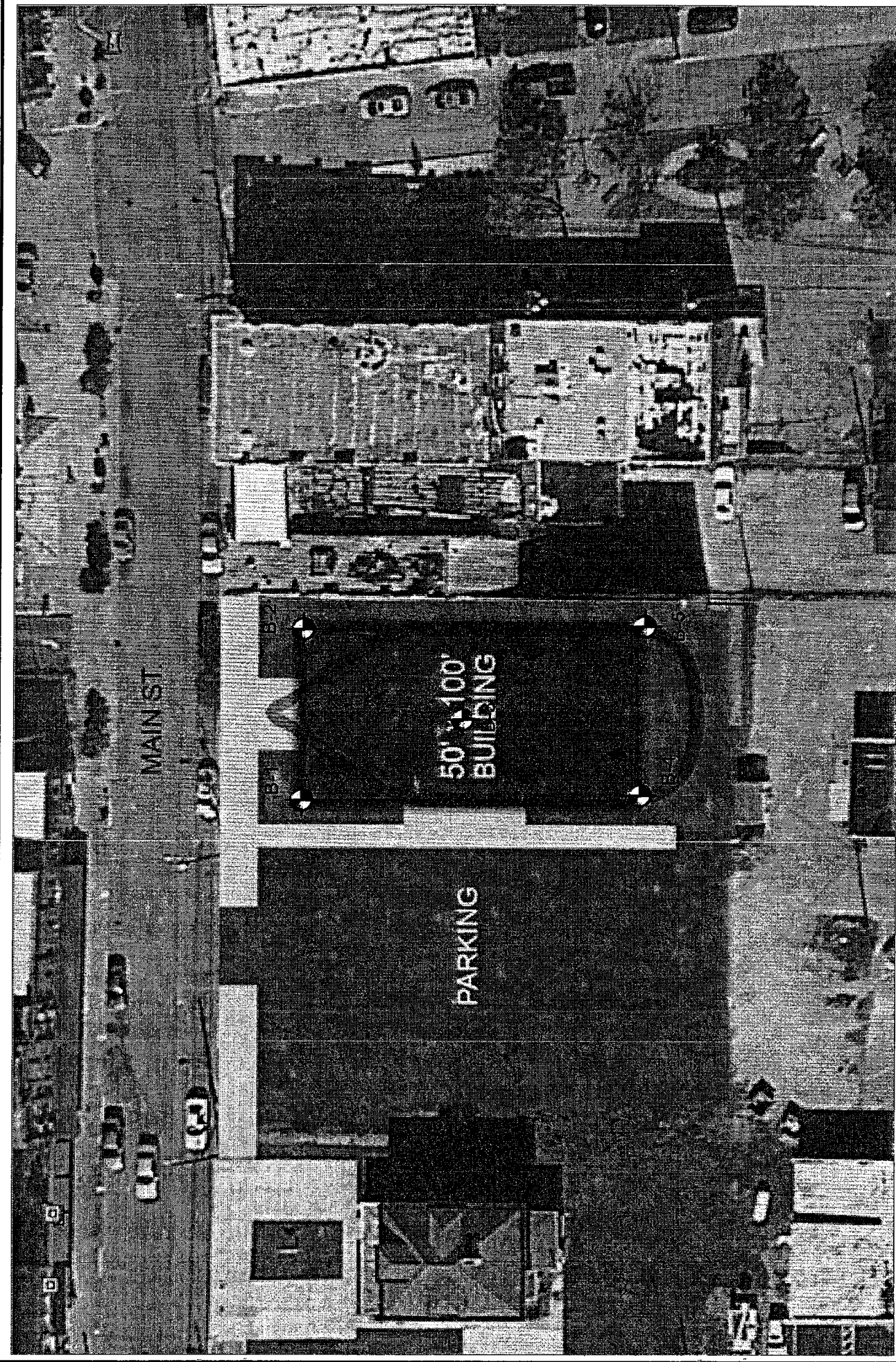
LIMITATIONS

This report was prepared for use by The Thrasher Group, and their authorized consultants, to aid in the design of this project. The report has been prepared in accordance with accepted geotechnical engineering practices and no other warranties, either expressed or implied, are made. The recommendations stated herein are contingent on American Geotech observing and evaluating all geotechnical aspects of the required work. We cannot be held responsible for any misinterpretations or improper implementation of our recommendations by other firms providing quality control services.

The recommendations presented in this report are based on data obtained from test borings made at the approximate locations shown on the Test Boring Location Plan. Variations which may exist between the test borings may not become evident until during construction. If significant variations are noted, we should be contacted so that the field conditions can be examined and the applicable recommendations revised, if necessary. Similarly, in the event of changes in the nature, design or location of the structure, or if other developments are planned, we should be notified so that we may review such changes to verify or make appropriate modifications to our previous conclusions and recommendations, which may be invalidated by any such changes.

TEST BORING LOCATION

*American Geotech, Inc.
601 Ohio Avenue
Charleston, West Virginia 25302*



TEST BORING LOCATION PLAN
Pt. Pleasant River Museum
316-318 Main Street
Pt. Pleasant, West Virginia

AMERICAN GEOTECH, INC.
601 OHIO AVENUE
CHARLESTON, WV 25302
(304) 340-4277

DATE	7-30-20	SCALE	NONE
DRAWN BY	Thrasher	CHECKED BY	KSP
ADAPTED BY	RDJ	SHEET	1 OF 1



Soil Test Boring Logs and Laboratory Data

*American Geotech, Inc.
601 Ohio Avenue
Charleston, West Virginia 25302*

Test Boring Log: Terminology and Symbols

Terminology

Grain Size

Soil Fraction		Particle Size	U.S. STD. Sieve Size
Boulders		Larger than 12"	Larger than 12"
Cobbles		3" to 12"	3" to 12"
Gravel	Coarse	¾" to 3"	¾" to 3"
	Fine	4.75 mm to ¾"	#4 to ¾"
Sand	Coarse	2.00 to 4.75 mm	#10 to #4
	Medium	0.425 to 2.00 mm	#40 to #10
	Fine	0.075 to 0.475 mm	#200 to #40
Fines	Clays & Silts	smaller than 0.075 mm	smaller than #200

Plasticity characteristics differentiate between silts and clays

Relative Density

Term	"N" Value
very loose	0 - 4
loose	5 - 10
medium dense	11 - 30
dense	31 - 50
very dense	over 50

Consistency

Term	ID Procedures	"N" Value
Soft	Easily penetrated by thumb	0 - 4
Medium Stiff	Penetrated by thumb with moderate effort	5 - 8
Stiff	Penetrated by thumb with great effort	9 - 15
Very Stiff	Readily indented by thumbnail	16 - 30
Hard	Indented by thumbnail with difficulty	31 - 50
Very Hard		over 50

Relative Moisture Description

Dry	Soil noticeably below optimum moisture
Moist	near optimum, but less than liquid limit
Damp	near or exceeding liquid limit
Wet	soil below water table

Symbols

Drilling and Sampling

RC - Rock Coring: Sizes AW, BW, NW, NQ
 RQD - Rock Quality Designator
 DC - Drive Casing
 HSA - Hollow Stem Auger
 FA - Flight Auger
 AG - Auger
 HA - Hand Auger
 SS - 2" diameter Split Barrel Sampler
 ST - 3" diameter Thin-Walled Tube Sampler
 AS - Auger Sample
 WS - Wash Sample
 NR - No Recovery
 S- Sounding
 ATV - All Terrain Vehicle

Laboratory Tests

PP - Pocket Penetrometer Reading, Tons/ft²
 QU - Unconfined Strength, Tons/ft²
 W - Moisture Content, %
 LL - Liquid Limit, %
 PL - Plastic Limit, %
 D - Dry Unit Weight, lbs/ft³

Standard Penetration Test

The penetration resistance, or N-value as it is commonly referred to, is the summation of the number of blows required to drive the last two successive 6" penetrations of the 2" diameter -18" long split barrel sampler. The sampler is driven with a 140 lb. weight falling 30". The standard penetration test is performed in compliance with procedures as set forth in ASTM D-1586

Water Level Measurement

NW - No water encountered
 WD - While drilling
 BCR - Before casing removal
 ACR - After casing removal
 CW - Caved and wet
 CM - Caved and moist
 BP - Backfilled upon completion

LOG OF TEST BORING

CLIENT The Thrasher Group, Inc. **BORING NO.** B - 1
PROJECT Proposed Pt. Pleasant River Museum - Pt. Pleasant, WV **DATE START** 7/24/20
BORING LOCATION As shown on plan **DATE COMP.** 7/24/20
ELEV. REF. None available **PO. NO.** _____

ELEV. FT.	DEPTH FT.	DESCRIPTION OF MATERIALS	SAMPLE				
			NO.	TP	DEPTH	BLOWS/6"	REC.
0.0	5.0	Reddish-brown to brown and gray 5.0' silty to sandy clay with rock and brick fragments (FILL), very moist to damp, soft to stiff. - 4" Concrete slab @ 1.5 ft. - Concrete footing @ 4 to 5 ft.	1	ss	0.0' - 1.5'	1-1-2	10"
			2	ss	2.5' - 4.0'		
			3	ss	5.0' - 6.5'	2-2-4	18"
			4	ss	7.5' - 9.0'	1-4-7	16"
			5	ss	10.0' - 11.5'	1-5-8	15"
			6	ss	15.0' - 16.5'	2-4-7	17"
16.5		Boring completed.					

GENERAL NOTES
 DRILLER J. Francis
 RIG NO. CME-45
 RIG TYPE Track
 METHOD HSA/SS

AMERICAN GEOTECH, INC.
 Geotechnical, Environmental & Testing Engineers
 601 Ohio Avenue
 Charleston, WV 25302
 (304) 340-4277

WATER LEVEL OBSERVATIONS
 IMMEDIATE NW FT.
 AT COMPLETION NW FT.
 AFTER BP HRS. NW FT.
 WATER USED IN DRILLING NW FT.

LOG OF TEST BORING

CLIENT The Thrasher Group, Inc. **BORING NO.** B-2
PROJECT Proposed Pt. Pleasant River Museum – Pt. Pleasant, WV **DATE START** 7/23/20
BORING LOCATION As shown on plan **DATE COMP.** 7/23/20
ELEV. REF. None available **PO. NO.** _____

ELEV. FT.	DEPTH FT.	DESCRIPTION OF MATERIALS	SAMPLE				
			NO.	TP	DEPTH	BLOWS/6"	REC.
0.0		Reddish-brown, brown and gray sandy to silty clay with rock, 4.5' concrete, brick and coal pieces, sand (FILL), very moist, medium stiff to soft.	1	ss	0.0' – 1.5'	10-5-1	16"
			2	ss	2.5' - 4.0'	0-1-0	10"
4.5		Brown and gray silty clay, trace 15.5' fine gravel to 7 ft, moist to very moist, soft to very stiff.	3	ss	5.0' – 6.5'	WOH-2-2	18"
			4	ss	7.5' - 9.0'	4-8-9	18"
			5	ss	10.0' – 11.5'	3-7-10	17"
			6	ss	15.0' - 16.5'	3-6-7	18"
20.0		Brown and gray clayey silt with 10.0' fine sand, damp, soft to medium stiff.	7	ss	20.0' - 21.5'	1-1-2	16"
			8	ss	25.0' - 26.5'	1-2-4	18"
30.0		5.0' Brown sandy clay, wet.					
35.0							
		29.5' Brown silty sand, with pebbles @ 63 ft, wet.					
64.5		1.0' Bedrock.					
65.5							
		Boring completed.					

GENERAL NOTES
 DRILLER J. Francis
 RIG NO. CME-45
 RIG TYPE Track
 METHOD HSA/SS

AMERICAN GEOTECH, INC.
 Geotechnical, Environmental & Testing Engineers
 601 Ohio Avenue
 Charleston, WV 25302
 (304) 340-4277

WATER LEVEL OBSERVATIONS
 IMMEDIATE 32.0 FT.
 AT COMPLETION NW FT.
 AFTER BP HRS. NW FT.
 WATER USED IN DRILLING NW FT.

LOG OF TEST BORING

CLIENT The Thrasher Group, Inc. **BORING NO.** B-3
PROJECT Proposed Pt. Pleasant River Museum – Pt. Pleasant, WV **DATE START** 7/24/20
BORING LOCATION As shown on plan **DATE COMP.** 7/24/20
ELEV. REF. None available **PO. NO.** _____

ELEV. FT.	DEPTH FT.	DESCRIPTION OF MATERIALS	SAMPLE				
			NO.	TP	DEPTH	BLOWS/6"	REC.
	0.0	Brown and grayish-brown silty 3.5' clay with sand, rock and brick fragments (FILL), very moist, soft.	1	SS	0.0' – 1.5'	8-1-1	16"
			2	SS	2.5' - 4.0'	1-2-1	14"
	3.5	- 4" Concrete slab @ 1.0 ft.					
		13.0' Grayish-brown to brown silty clay, moist, medium stiff to stiff.	3	SS	5.0' – 6.5'	2-2-4	18"
			4	SS	7.5' - 9.0'	1-6-8	15"
			5	SS	10.0' – 11.5'	1-5-7	14"
			6	SS	15.0' - 16.5'	1-2-3	15"
	16.5	Boring completed.					

GENERAL NOTES DRILLER <u>J. Francis</u> RIG NO. <u>CME-45</u> RIG TYPE <u>Track</u> METHOD <u>HSA/SS</u>	<u>AMERICAN GEOTECH, INC.</u> Geotechnical, Environmental & Testing Engineers 601 Ohio Avenue Charleston, WV 25302 (304) 340-4277	WATER LEVEL OBSERVATIONS IMMEDIATE <u> </u> <u>NW</u> <u> </u> FT. AT COMPLETION <u> </u> <u>NW</u> <u> </u> FT. AFTER <u> </u> <u>BP</u> <u> </u> <u>HRS.</u> <u> </u> <u>NW</u> <u> </u> FT. WATER USED IN DRILLING <u> </u> <u>NW</u> <u> </u> FT.
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LOG OF TEST BORING

CLIENT The Thrasher Group, Inc. **BORING NO.** B-4
PROJECT Proposed Pt. Pleasant River Museum - Pt. Pleasant, WV **DATE START** 7/23/20
BORING LOCATION As shown on plan **DATE COMP.** 7/23/20
ELEV. REF. None available **PO. NO.** _____

ELEV. FT.	DEPTH FT.	DESCRIPTION OF MATERIALS	SAMPLE				
			NO.	TP	DEPTH	BLOWS/6"	REC.
	0.0	Brown to black sandy clay to 4.5' clayey sand with rock, concrete, brick and wood pieces (FILL), moist, stiff to soft.	1	SS	0.0' - 1.5'	5-6-8	16"
			2	SS	2.5' - 4.0'	1-1-2	3"
4.5		Brown and gray silty clay, trace 14.5' fine gravel to 7 ft, moist, medium stiff to very stiff.	3	SS	5.0' - 6.5'	1-2-4	18"
			4	SS	7.5' - 9.0'	4-7-10	18"
			5	SS	10.0' - 11.5'	1-5-8	16"
			6	SS	15.0' - 16.5'	1-2-3	11"
19.0		5.0' Brown clayey silt with fine sand, damp, soft.	7	SS	20.0' - 21.5'	1-2-2	17"
24.0		39.0' Brown silty sand, with pebbles @ 55 ft, wet.	8	SS	25.0' - 26.5'	2-2-5	18"
63.0		2.0' Bedrock.					
65.0		Boring completed.					

GENERAL NOTES DRILLER <u>J. Francis</u> RIG NO. <u>CME-45</u> RIG TYPE <u>Track</u> METHOD <u>HSA/SS</u>	<u>AMERICAN GEOTECH, INC.</u> Geotechnical, Environmental & Testing Engineers 601 Ohio Avenue Charleston, WV 25302 (304) 340-4277	WATER LEVEL OBSERVATIONS IMMEDIATE <u>24.0</u> FT. AT COMPLETION <u>NW</u> FT. AFTER <u>BP</u> HRS. <u>NW</u> FT. WATER USED IN DRILLING <u>NW</u> FT.
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LOG OF TEST BORING

CLIENT The Thrasher Group, Inc. **BORING NO.** B-5
PROJECT Proposed Pt. Pleasant River Museum – Pt. Pleasant, WV **DATE START** 7/24/20
BORING LOCATION As shown on plan **DATE COMP.** 7/24/20
ELEV. REF. None available **PO. NO.** _____

ELEV. FT.	DEPTH FT.	DESCRIPTION OF MATERIALS	SAMPLE				
			NO.	TP	DEPTH	BLOWS/6"	REC.
0.0		Brown sand with rock, concrete 4.5' and brick pieces (FILL), moist, very loose.	1	SS	0.0' – 1.5'	2-1-1	4"
			2	SS	2.5' - 4.0'	1-1-2	0"
4.5		Brown and gray silty clay, trace 12.0' fine gravel to 7 feet, very moist to moist, stiff to very stiff.	3	SS	5.0' – 6.5'	4-5-7	14"
			4	SS	7.5' - 9.0'	5-8-9	17"
			5	SS	10.0' – 11.5'	4-7-10	15"
			6	SS	15.0' - 16.5'	2-5-4	16"
16.5		Boring completed.					

GENERAL NOTES DRILLER <u>J. Francis</u> RIG NO. <u>CME-45</u> RIG TYPE <u>Track</u> METHOD <u>HSA/SS</u>	<u>AMERICAN GEOTECH, INC.</u> Geotechnical, Environmental & Testing Engineers 601 Ohio Avenue Charleston, WV 25302 (304) 340-4277	WATER LEVEL OBSERVATIONS IMMEDIATE <u>3.0 (Trapped)</u> FT. AT COMPLETION <u>NW</u> FT. AFTER <u>BP</u> HRS. <u>NW</u> FT. WATER USED IN DRILLING <u>NW</u> FT.
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AMERICAN GEOTECH, INC.

601 Ohio Avenue

Charleston, West Virginia 25302

The Thrasher Group

Proposed Pt. Pleasant River Museum

Pt. Pleasant, West Virginia

TABULATION OF TEST DATA

Hole No.	Sample No.	Depth (ft.)	Unconfined Compressive Strength (tsf)	Failure Strain (%)	Dry Density (pcf)	Water Content (%)	Pocket Penetrometer (tsf)
B-1	S-1	0.0 - 1.5				27.1	0.75
	S-2	2.5 - 4.0				45.3	
	S-3	5.0 - 6.5				23.8	2.75
	S-4	7.5 - 9.0				20.8	4.5
B-2	S-1	0.0 - 1.5				30.0	1.0
	S-2	2.5 - 4.0				27.1	1.0
	S-3	5.0 - 6.5	0.99	19.96	102.1	24.8	
	S-4	7.5 - 9.0				22.5	4.5
	S-5	10.0 - 11.5				21.9	4.25
B-3	S-1	0.0 - 1.5				31.5	

AMERICAN GEOTECH, INC.
 601 Ohio Avenue
 Charleston, West Virginia 25302

The Thrasher Group
 Proposed Pt. Pleasant River Museum
 Pt. Pleasant, West Virginia

TABULATION OF TEST DATA

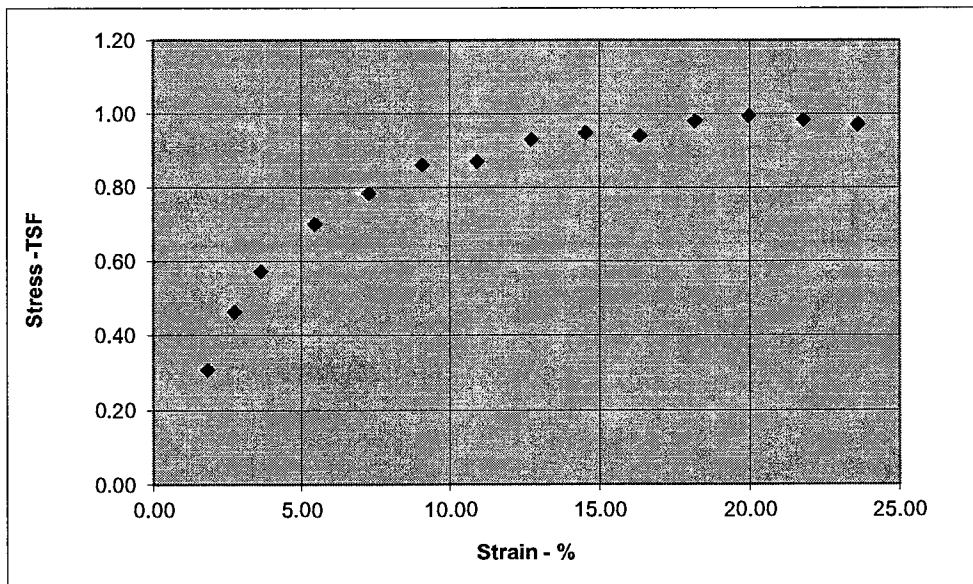
Hole No.	Sample No.	Depth (ft.)	Unconfined Compressive Strength (tsf)	Failure Strain (%)	Dry Density (pcf)	Water Content (%)	Pocket Penetrometer (tsf)
	S-2	2.5 - 4.0				22.9	3.5
	S-3	5.0 - 6.5				23.6	3.75
	S-4	7.5 - 9.0				20.8	4.5
B-4	S-3	5.0 - 6.5				24.3	2.75
	S-4	7.5 - 9.0				22.0	3.25
	S-5	10.0 - 11.5				24.5	4.25
B-5	S-3	5.0 - 6.5				25.3	1.0
	S-4	7.5 - 9.0				22.0	4.5
	S-5	10.0 - 11.5				24.2	3.75

American Geotech, Inc.

Geotechnical, Environmental, and Testing Engineers
 601 Ohio Avenue
 Charleston, West Virginia 25302
 (304) 340-4277

Client	Thrasher Group, Inc.	Job No.	
Project	Proposed Pt. Pleasant River Museum - Pt. Pleasant, WV		
Soil Description	Brown and gray silty clay, trace fine gravel, moist to very moist		
Test By	RJ	Testing Date	7/29/2020
Boring Number	B-2	Sample Number	S-3
Confining Pressure		Dry Density	102.1
		Water Content	24.8

Percent Strain (%)	Sample stress (TSF)
0.91	0.15
1.81	0.31
2.72	0.46
3.63	0.57
5.44	0.70
7.26	0.78
9.07	0.86
10.89	0.87
12.70	0.93
14.52	0.95
16.33	0.94
18.15	0.98
19.96	0.99
21.78	0.98
23.59	0.97



Unconfined Compressive Strength	<u>0.99</u>	TSF
Failure Strain	<u>19.96</u>	%

Remarks:
